



Lessard-Sams Outdoor Heritage Council

Shallow Lakes and Wetland Enhancement - Phase 10

Laws of Minnesota 2018 Accomplishment Plan

General Information

Date: 01/03/2023

Project Title: Shallow Lakes and Wetland Enhancement - Phase 10

Funds Recommended: \$2,759,000

Legislative Citation: ML 2018, Ch. 208, Art. 1, Sec. 2, subd 4(e)

Appropriation Language: \$2,759,000 the second year is to the commissioner of natural resources to enhance and restore shallow lakes and wetland habitat statewide. A list of proposed land restorations and enhancements must be provided as part of the required accomplishment plan.

Manager Information

Manager's Name: Ricky Lien

Title:

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Location Information

County Location(s): Wright, Nobles, Le Sueur, Murray, Todd, , Marshall, Cottonwood, Olmsted, Rice, Lyon, Polk, Freeborn, Waseca, Anoka, Fillmore and Aitkin.

Eco regions in which work will take place:

- Northern Forest
- Forest / Prairie Transition
- Prairie
- Metro / Urban
- Southeast Forest

Activity types:

- Restore
- Enhance

Priority resources addressed by activity:

- Wetlands

Narrative

Abstract

This proposal will accomplish 25,000 acres of shallow lake and wetland enhancement and restoration work throughout Minnesota, with a focus on the prairie region. The proposal is comprised of three components: (1) twenty-seven projects to engineer and/or construct wetland infrastructure or to enhance wetlands and shallow lakes; (2) funding for the existing Roving Habitat Crew in Region 4 to continue wetland and shallow lake enhancement work, and; (3) funding to base a new Shallow Lakes program specialist in Windom to accelerate shallow lakes work in the prairie region of SW Minnesota

Design and Scope of Work

Minnesota wetlands, besides being invaluable for waterfowl, also provide other desirable functions and values - habitat for a wide range of species, groundwater recharge, water purification, flood water storage, shoreline protection, and economic benefits. An estimated 90% of Minnesota's prairie wetlands have been lost, more than 50% of our statewide wetland resource. In remaining wetlands, benefits are too often compromised by degraded habitat quality due to excessive runoff and invasive plants and fish.

This proposal will accomplish 25,000 acres of enhancement and restoration work throughout Minnesota, with a focus on the prairie region.

ROVING HABITAT CREW - Numerous plans pertaining to wetlands and shallow lakes call for effective management to provide maximum benefits for wildlife. Past Outdoor Heritage Fund (OHF) moneys were used to establish regional Roving Habitat Crews to address

needed upland and wetland habitat management work on state wildlife properties. We have seen remarkable recoveries of both habitat quality and wildlife use of wetlands when we have invested in active management. The funding requested in this proposal will

be targeted to continuing the wetland enhancement work of the existing Region 4 Roving Habitat Crew. Crew work will include, but not be limited to, managing water levels, installing fish barriers and other wetland infrastructure, inducing winter-kill of fish, and controlling invasive plants and fish.

SHALLOW LAKES / WETLAND PROJECTS -The habitat quality of the shallow lakes and wetlands still on the landscape can be markedly improved by controlling invasive species and rough fish, installing fish barriers where needed and actively managing water levels to

meet management objectives. This proposal seeks to engineer and construct wetland infrastructure such as dikes, water control structures, and fish barriers, and to implement management techniques such as prescribed burns, rough fish control and water level manipulation. the largest project (20,000 acres) in this proposal will see prescribed fire used in wetlands using aerial ignition. The shallow lake and wetland projects identified in this proposal for enhancement were proposed and ranked by DNR Area Wildlife Supervisors through their respective Regional Wildlife Managers and were reviewed by the Wetland Habitat Team. Projects, as shown in the accompanying parcel list, include restoration of wetlands, engineering feasibility and design work, replacement/renovation of wetland infrastructure, and wetland enhancement. The parcel list associated with these projects may be modified, increased, or reduced as needed within the scope of this proposal.

SHALLOW LAKES PROGRAM - Shallow Lakes specialists perform critical roles in assessing shallow lakes and initiating needed management. Requested funding would allow the creation of a new shallow lake specialist position to be based in Windom, MN, to accelerate shallow lakes work in the prairie region of SW Minnesota. In addition to purchasing supplies and equipment needed for shallow lake assessment and management work, capital equipment in the form of a Trimble survey unit and a UTV upon which to mount it, and a boat, motor and trailer will be acquired, along with data loggers for water level monitoring.

How does the plan address habitats that have significant value for wildlife species of greatest conservation need, and/or threatened or endangered species, and list targeted species?

Minnesota has lost almost half of its original presettlement wetlands, with some regions of the state having lost more than 90% of their original wetlands. A statewide review of Species of Greatest Conservation Need (SGCN) found that wetlands are one of the three habitat types (along with prairies and rivers) most used by these species. This request includes wetland management actions identified to support SGCN: prevention of wetland degradation, wetland restoration, and control of invasives. In the Minnesota County Biological Survey description of the marsh community, special attention is given to two issues faced in Minnesota marshes - stable high water levels that reduce species diversity, often to a point at which a monotypic system evolves, and the "invasion of marshes by the non-native species narrow-leaved cattail" and its hybrids. Both of these issues will be addressed by projects named within this proposal. Nationwide, 43% of threatened or endangered plants and animals live in or depend on wetlands.

Shallow lakes and non-forested prairie wetlands are identified as critical habitats for many "Species of Greatest Conservation Need" listed in Minnesota's "Tomorrow's Habitat for the Wild & Rare: An Action Plan for Minnesota Wildlife." Species listed in the Action Plan as requiring shallow lakes include lesser scaup, northern pintail, common moorhen, least bittern, American bittern, marsh wren, and Virginia rail, along with being "important for many other species". Specific species listed in the Action Plan as requiring emergent marshes are the least bittern, American bittern, marsh wren, and Virginia rail. Forster's terns are listed as requiring large deep-water marshes.

A MN County Biological Survey database search of endangered and threatened birds and amphibians is provided in the proposal attachments.

Describe how the plan uses science-based targeting that leverages or expands corridors and complexes, reduces fragmentation or protects areas identified in the MN County Biological Survey:

Shallow Lakes staff provide standardized, rigorous assessments of shallow lakes to determine management needs and document habitat management effectiveness. Shallow lakes research has proven the effectiveness of management practices being employed

The Minnesota Duck Recovery Plan goals include boosting the state's breeding duck population. The most productive prairie waterfowl habitat is a mix of wetland and grassland as a habitat complex. A complex could be 4 - 9 square miles and should be comprised of 10% temporary/seasonal wetlands, 10% permanent wetlands, and 40% grasslands, with the remaining 40% available for crops. In addition to mixes of grasslands and healthy wetlands, The Duck Plan also called for accelerated efforts to restore 1,800 shallow lakes, including wild rice lakes.

The Minnesota Prairie Conservation Plan, which is a plan for both uplands and wetlands in the prairie region of Minnesota, outlines focal areas (Core Areas and Habitat Complexes) where we can build on an existing base of conservation lands and improve the habitat there. The Prairie Wetland Initiative component of this OHF grant would contribute to these identified Core Areas and Habitat Complexes by working to actively manage and improve small wetlands on public lands, especially on those lands contributing to the Minnesota Comprehensive Prairie Plan. The Status and Trends of Wetlands in Minnesota: Depressional Wetland Quality Assessment (2007 – 2012), produced by the Minnesota Pollution Control Agency, noted that while most wetlands in northern Minnesota are in good condition, the opposite is true in the central and former prairie regions of the state, where degraded vegetation communities are predominant. Vegetation communities in more than half of these depressional wetlands are in poor condition (56%), with only 17% in good condition, similar to the quality of all wetland types in the central hardwood and former prairie regions. Non-native invasive plants are having the greatest impact.

The projects and initiatives called for in this OHF proposal will directly contribute to expanded and healthy wetland complexes and increased shallow lakes work. Work will renovate existing wetland infrastructure and establish new management, especially in the critical prairie region of Minnesota.

Which two sections of the Minnesota Statewide Conservation and Preservation Plan are most applicable to this project?

- H4 Restore and protect shallow lakes
- H5 Restore land, wetlands and wetland-associated watersheds

Which two other plans are addressed in this program?

- Long Range Duck Recovery Plan
- Minnesota Prairie Conservation Plan

Which LSOHC section priorities are addressed in this program?

Forest / Prairie Transition

- Protect, enhance, and restore migratory habitat for waterfowl and related species, so as to increase migratory and breeding success

Metro / Urban

- Protect, enhance, and restore remnant native prairie, Big Woods forests, and oak savanna with an emphasis on areas with high biological diversity

Northern Forest

- Protect shoreland and restore or enhance critical habitat on wild rice lakes, shallow lakes, cold water lakes, streams and rivers, and spawning areas

Prairie

- Protect, enhance, or restore existing wetland/upland complexes, or convert agricultural lands to new wetland/upland habitat complexes

Southeast Forest

- Protect from long-term or permanent endangerment from invasive species

Does this program include leveraged funding?

-

How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended?

DNR engineers design and oversee construction and renovation of infrastructure to achieve long-lasting results. A typical goal is to have constructed water control structures, dikes and fish barriers last a minimum of 30-40 years. The management of completed infrastructure projects will fall on existing staff of the Department of Natural Resources. Periodic enhancements such as invasive species removal, supplemental vegetation planting, or water control structure installation, maintenance, or replacement, will be accomplished through annual funding requests to a variety of funding sources including, but not limited to, the Game and Fish Fund, bonding, gifts, the Environmental and Natural Resources Trust Fund, the Outdoor Heritage Fund, and federal sources such as North American Wetlands Conservation Act grants. Wetland enhancement projects such as cattail control, prescribed burns, rough fish management and the like are implemented to achieve quality, long-lasting habitat benefits lasting benefits, realistically they have variable lifespans due to conditions imposed by climate, physical factors, etc. Monitoring by area wildlife staff and shallow lakes specialists will ensure that followup management is employed as needed.

Actions to Maintain Project Outcomes

Year	Source of Funds	Step 1	Step 2	Step 3
Ongoing	Various: Game and Fish, OHF, NAWCA, etc.	Area wildlife staff and shallow lakes specialists will review completed projects and management activities to determine	Standardized shallow lake assessments will be conducted on appropriate shallow lakes to document physical results of	-

		level of success and need for any follow-up actions.	projects or management activities.	
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Activity Details

Requirements

If funded, this program will meet all applicable criteria set forth in MS 97A.056?

Yes

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program?

Yes

Is the restoration and enhancement activity on permanently protected land per 97A.056, Subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 or on lands to be acquired in this program?

Yes

Where does the activity take place?

- WMA
- WPA
- Refuge Lands
- Public Waters
- State Forests

Land Use

Will there be planting of any crop on OHF land purchased or restored in this program?

No

Timeline

Activity Name	Estimated Completion Date
Feasibility and Engineering projects	July 2023
Infrastructure Construction/Renovation projects	July 2023
Roving Habitat Crew Wetland Enhancement Work	June 2022
Shallow Lakes Assessments	June 2022

Date of Final Report Submission: 10/31/2023

Availability of Appropriation: Subd. 7. Availability of Appropriation

Money appropriated in this section may not be spent on activities unless they are directly related to and necessary for a specific appropriation and are specified in the accomplishment plan approved by the Lessard-Sams Outdoor Heritage Council. Money appropriated in this section must not be spent on indirect costs or other institutional overhead charges that are not directly related to and necessary for a specific appropriation. Unless otherwise provided, the amounts in this section are available until June 30, 2021. For acquisition of real property, the amounts in this section are available until June 30, 2022, if a binding agreement with a landowner or purchase agreement is entered into by June 30, 2021, and closed no later than June 30, 2022. Funds for restoration or enhancement are available until June 30, 2023, or five years after acquisition, whichever is later, in order to complete initial restoration or enhancement work. If a project receives at least 15 percent of its funding from federal funds, the time of the appropriation may be extended to equal the availability of federal funding to a

maximum of six years if that federal funding was confirmed and included in the second draft accomplishment plan. Funds appropriated for fee title acquisition of land may be used to restore, enhance, and provide for public use of the land acquired with the appropriation. Public-use facilities must have a minimal impact on habitat in acquired lands.

Budget

Budget reallocations up to 10% do not require an amendment to the Accomplishment Plan.

Totals

Item	Funding Request	Antic. Leverage	Leverage Source	Total
Personnel	\$582,000	-	-	\$582,000
Contracts	\$1,122,000	-	-	\$1,122,000
Fee Acquisition w/ PILT	-	-	-	-
Fee Acquisition w/o PILT	-	-	-	-
Easement Acquisition	-	-	-	-
Easement Stewardship	-	-	-	-
Travel	\$176,000	-	-	\$176,000
Professional Services	\$649,000	-	-	\$649,000
Direct Support Services	\$96,000	-	-	\$96,000
DNR Land Acquisition Costs	-	-	-	-
Capital Equipment	\$65,000	-	-	\$65,000
Other Equipment/Tools	\$23,000	-	-	\$23,000
Supplies/Materials	\$46,000	-	-	\$46,000
DNR IDP	-	-	-	-
Grand Total	\$2,759,000	-	-	\$2,759,000

Personnel

Position	Annual FTE	Years Working	Funding Request	Antic. Leverage	Leverage Source	Total
Roving Habitat Crew - Region 4	2.0	3.0	\$249,000	-	-	\$249,000
Shallow Lakes Specialist - Windom	1.0	5.0	\$333,000	-	-	\$333,000

Capital Equipment

Item	Funding Request	Antic. Leverage	Leverage Source	Total
boat/trailer/motor for Shallow Lakes Specialist - Windom	\$10,000	-	-	\$10,000
Trimble survey units (2)	\$55,000	-	-	\$55,000

Amount of Request: \$2,759,000

Amount of Leverage: -

Leverage as a percent of the Request: 0.0%

DSS + Personnel: \$678,000

As a % of the total request: 24.57%

Easement Stewardship: -

As a % of the Easement Acquisition: -

How will this program accommodate the reduced appropriation recommendation from the original proposed requested amount?

Individual wetland projects were prioritized and some have been delayed to a future date. Hiring of two small prairie wetland specialists to establish a programs to assess and manage small wetlands has been postponed.

Contracts

What is included in the contracts line?

All the funding in the contract line of budget is for R/E work.

Travel

Does the amount in the travel line include equipment/vehicle rental?

-

Explain the amount in the travel line outside of traditional travel costs of mileage, food, and lodging

I understand and agree that lodging, meals, and mileage must comply with the current MMB Commissioner Plan:

No

Direct Support Services

How did you determine which portions of the Direct Support Services of your shared support services is direct to this program?

Direct Support Services is determined by a standard DNR process taking into account the amount of funding and the number of allocations made with that funding.

Federal Funds

Do you anticipate federal funds as a match for this program?

No

Output Tables**Acres by Resource Type (Table 1)**

Type	Wetland	Prairie	Forest	Habitat	Total Acres
Restore	73	0	0	0	73
Protect in Fee with State PILT Liability	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0
Protect in Easement	0	0	0	0	0
Enhance	25,224	0	0	0	25,224
Total	25,297	0	0	0	25,297

Total Requested Funding by Resource Type (Table 2)

Type	Wetland	Prairie	Forest	Habitat	Total Funding
Restore	\$160,600	-	-	-	\$160,600
Protect in Fee with State PILT Liability	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$2,598,400	-	-	-	\$2,598,400
Total	\$2,759,000	-	-	-	\$2,759,000

Acres within each Ecological Section (Table 3)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Acres
Restore	0	0	0	73	0	73
Protect in Fee with State PILT Liability	0	0	0	0	0	0
Protect in Fee w/o State PILT Liability	0	0	0	0	0	0
Protect in Easement	0	0	0	0	0	0
Enhance	900	21,720	10	2,594	0	25,224
Total	900	21,720	10	2,667	0	25,297

Total Requested Funding within each Ecological Section (Table 4)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest	Total Funding
Restore	-	-	-	\$160,600	-	\$160,600
Protect in Fee with State PILT Liability	-	-	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-	-	-
Protect in Easement	-	-	-	-	-	-
Enhance	\$590,500	\$246,600	\$51,800	\$1,688,800	\$20,700	\$2,598,400
Total	\$590,500	\$246,600	\$51,800	\$1,849,400	\$20,700	\$2,759,000

Average Cost per Acre by Resource Type (Table 5)

Type	Wetland	Prairie	Forest	Habitat
Restore	\$2,200	-	-	-
Protect in Fee with State PILT Liability	-	-	-	-
Protect in Fee w/o State PILT Liability	-	-	-	-
Protect in Easement	-	-	-	-
Enhance	\$103	-	-	-

Average Cost per Acre by Ecological Section (Table 6)

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	N. Forest
Restore	-	-	-	\$2,200	-
Protect in Fee with State PILT Liability	-	-	-	-	-

Protect in Fee w/o State PILT Liability	-	-	-	-	-
Protect in Easement	-	-	-	-	-
Enhance	\$656	\$11	\$5,180	\$651	-

Target Lake/Stream/River Feet or Miles

Outcomes

Programs in forest-prairie transition region:

- Protected, restored, and enhanced nesting and migratory habitat for waterfowl, upland birds, and species of greatest conservation need ~ *Intensive wetland management and habitat infrastructure maintenance will provide the wetland base called for in numerous prairie, shallow lake and waterfowl plans. Area wildlife staff and/or shallow lakes staff will monitor completed projects to determine success of implementation and to assess the need for future management and/or maintenance.*

Programs in metropolitan urbanizing region:

- Game lakes are significant contributors of waterfowl, due to efforts to protect uplands adjacent to game lakes ~ *Intensive wetland management and habitat infrastructure maintenance will provide the wetland base called for in numerous prairie, shallow lake and waterfowl plans. Area wildlife staff and/or shallow lakes staff will monitor completed projects to determine success of implementation and to assess the need for future management and/or maintenance.*

Programs in the northern forest region:

- Improved availability and improved condition of habitats that have experienced substantial decline ~ *Intensive wetland management and habitat infrastructure maintenance will provide the wetland base called for in numerous prairie, shallow lake and waterfowl plans. Area wildlife staff and/or shallow lakes staff will monitor completed projects to determine success of implementation and to assess the need for future management and/or maintenance.*

Programs in prairie region:

- Protected, restored, and enhanced shallow lakes and wetlands ~ *Intensive wetland management and habitat infrastructure maintenance will provide the wetland base called for in numerous prairie, shallow lake and waterfowl plans. Area wildlife staff and/or shallow lakes staff will monitor completed projects to determine success of implementation and to assess the need for future management and/or maintenance.*

Programs in southeast forest region:

- Healthier populations of endangered, threatened, and special concern species as well as more common species ~ *Intensive wetland management and habitat infrastructure maintenance will provide the wetland base called for in numerous prairie, shallow lake and waterfowl plans. Area wildlife staff and/or shallow lakes staff will monitor completed projects to determine success of implementation and to assess the need for future management and/or maintenance.*

Parcels

For restoration and enhancement programs ONLY: Managers may add, delete, and substitute projects on this parcel list based upon need, readiness, cost, opportunity, and/or urgency so long as the substitute parcel/project forwards the constitutional objectives of this program in the Project Scope table of this accomplishment plan. The final accomplishment plan report will include the final parcel list.

Parcel Information

Sign-up Criteria?

No

Explain the process used to identify, prioritize, and select the parcels on your list:

Restore / Enhance Parcels

Name	County	TRDS	Acres	Est Cost	Existing Protection
White Elk Lake enhancement engineering	Aitkin	05027213	0	\$20,000	Yes
Carlos Avery Water Control Structure Replacements	Anoka	03322228	400	\$200,000	Yes
Ancil C. Budolfson WMA Wetland Restoration Feasibility Slayton	Cottonwood	10738230	0	\$15,000	Yes
Windom - String Lake WMA Wetland Restorations	Cottonwood	10535231	50	\$100,000	Yes
Water Control Structure - Upper Iowa River WMA	Fillmore	10213223	10	\$35,000	Yes
Water Control Structure - Goethite WMA	Fillmore	10113231	10	\$35,000	Yes
Manchester WMA Water Control Structure	Freeborn	10322202	55	\$40,000	Yes
Earl Swain WMA Wetland Enhancement	Le Sueur	10924222	30	\$80,000	Yes
Dora Lake Wetland Restoration Projects	Le Sueur	11023211	23	\$55,000	Yes
Scotch Lake Feasibility and Design	Le Sueur	11025223	0	\$15,000	Yes
Jacobson Wetland WCS design	Lyon	11041219	0	\$15,000	Yes
East Park Impoundment: Structure and dike repair	Marshall	15844220	1,720	\$151,000	Yes
Plum Creek WMA Wetland Restoration Feasibility Slayton	Murray	10839215	0	\$15,000	Yes
Chandler WMA Moon Slough Water Control Feasibility Slayton	Murray	10642230	0	\$15,000	Yes
Wachter WMA Wetland Enhancement Feasibility Slayton	Nobles	10140223	0	\$15,000	Yes
Eastside WMA Water Control Structure Replacement	Olmsted	10613204	0	\$15,000	Yes
Kroening Marsh	Polk	14741225	17	\$90,000	Yes
Esker Marsh Water Control Structure	Rice	11221222	16	\$27,000	Yes
Circle Lake Wetland Dike Rehab	Rice	11121216	46	\$55,000	Yes
Paulson Marsh Water Control Structure and Dike Rehab	Rice	11121211	55	\$85,000	Yes
Staples Dike Rehabilitation Phase 3 Design	Todd	13333225	0	\$30,000	Yes
Grey Eagle Upper Impoundment Design	Todd	12733209	0	\$20,000	Yes
Goose Lake fish barrier design	Waseca	10722211	0	\$15,000	Yes
Mott Lake Fish Treatment	Waseca	10624226	115	\$40,000	Yes
Shakopee Lake Fish Barrier Lake Enhancement	Wright	11828233	200	\$150,000	Yes
Albion WMA Willima Lake Water Control Structure Enhancement	Wright	12027208	300	\$220,000	Yes

Wetland Aerial Ignition	-	15542201	20,000	\$37,000	Yes
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